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BEFORE THE BOARD OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
IN AND FOR THE STATE OF UTAH

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IN THE MATTER OF THE )  
REQUEST FOR AGENCY )  
ACTION OF MAR/REG OIL )  
COMPANY FOR AN ORDER )  
ESTABLISHING 160-ACRE )  
DRILLING AND SPACING UNITS )  
FOR HORIZONTAL WELLS IN )  
AND THE PRODUCTION OF OIL, )  
GAS, AND OTHER HYDROCARBONS )  
FROM THE DESERT CREEK AND )  
UPPER ISMAY FORMATIONS IN )  
THE NE1/4 OF SECTION 19, )  
TOWNSHIP 38 SOUTH, RANGE 26 )  
EAST, S.L.M., SAN JUAN )  
COUNTY, UTAH. )

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DOCKET NO. 2010-024, CAUSE NO. 188-04  
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TAKEN AT: Uintah Basin Applied Technology  
College  
Multipurpose Room  
1100 East Lagoon Street  
Roosevelt, Utah

DATE: September 22, 2010  
TIME: 9:44 a.m. to 11:13 a.m.

REPORTED BY: Emily A. Gibb, RPR, CSR

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APPEARANCES

CHAIRMAN:  
Douglas E. Johnson

BOARD MEMBERS:  
Ruland J. Gill, Jr. (Excused)  
Jake Y. Harouny  
James T. Jensen  
Kelly Payne (Excused)  
Samuel C. Quigley  
Jean Semborski

DIVISION OF OIL, GAS AND MINING:  
John R. Baza, Director  
Dana Dean, Associate Director, Mining (Excused)  
Jim Springer, Public Information Officer  
Steve Schneider, Administrative Policy Coordinator  
Julie Ann Carter, Secretary to the Board

ASSISTANT ATTORNEYS GENERAL:  
Fred Donaldson - Division Attorney  
Michael S. Johnson - Board Attorney

1 Docket No. 2010-024 Cause No. 188-04

2 Wednesday, September 22, 2010

3 (The proceedings began at 9:44 a.m.)

4  
5  
6 CHAIRMAN JOHNSON: Okay. The third matter  
7 we have then this morning is Docket No. 2010-024,  
8 Cause No. 188-04, in the Matter of the Request for  
9 Agency Action of MAR/REG Oil Company for an Order  
10 Establishing 160-Acre Drilling and Spacing Units for  
11 Horizontal Wells in and the Production of Oil and --  
12 Oil, Gas, and other Hydrocarbons from the Desert  
13 Creek and Upper Ismay Formations in the North East  
14 corner of Section 19, Township 38 South, Range 26  
15 East, Salt Lake Meridian, San Juan County, Utah.

16 Mr. Clawson, you're representing MAR/REG?

17 MR. CLAWSON: Thank you, Mr. Chairman.

18 Yes, Tom Clawson on behalf of MAR/REG Oil  
19 Company.

20 CHAIRMAN JOHNSON: Thank you.

21 Mr. Donaldson, are you representing the  
22 Division?

23 MR. DONALDSON: Yes, Mr. Chairman.

24 CHAIRMAN JOHNSON: Thank you.

25 Mr. Clawson, please go ahead.

1           MR. CLAWSON:   Okay.   Thank you very much.  
2   Today we're here asking the board's approval for  
3   160-acre drilling unit -- actually drilling units for  
4   two formations located in the Squaw Canyon Field in  
5   San Juan County, Utah.   Those formations are the  
6   upper Ismay and the Desert Creek formations, and  
7   we're seeking 160-acre spacing for two lateral  
8   horizontal wells, drilled one each -- one into each  
9   one of those stratigraphic intervals.

10           This -- the -- the subject lands is the  
11   northeast quarter of Section 19 in Township 38 South,  
12   Range 26 East.   These lands previously have been  
13   spaced by the board back in 1980, and Cause No.  
14   188-1, the board approved 80-acre spacing for the  
15   Desert Creek formation, essentially stand-up units,  
16   drilling units, which means it was the east half and  
17   the west half.   And that order also included other  
18   lands besides subject Section 19.

19           In Cause No. 188-1C, the board, after quite  
20   a bit of extensive drilling, the board vacated that  
21   order with respect to some lands, but not including  
22   Section 19.

23           And in Cause No. 188-3, the board approved  
24   an exception well location for the Three Amigos well,  
25   which is located in the northwest quarter of

1 Section 19.

2 And in 1988, the board -- I mean, I'm sorry,  
3 the 1989, Cause No. 188-3A. The board vacated the  
4 previous spacing orders for the Desert Creek  
5 formation, which in up shot means that the subject  
6 lands, which is the northeast quarter, are not  
7 subject to any spacing order by the board, and they  
8 were made subject to the board's general location  
9 rules. So the board has spaced this, but it's also  
10 vacated the order that's spaced it previously.

11 Nevertheless, it is still subject to the  
12 board's temporary spacing rule, creating a 640-acre  
13 drilling unit for a horizontal well. And that's its  
14 current status right now. We're here today seeking  
15 the board's approval of 160-acre spacing for a  
16 horizontal well because, as the evidence will show,  
17 the formation and -- and the reservoir properties  
18 don't support spacing the entire 640 acres in this  
19 section for purposes of producing the upper Ismay and  
20 the Desert Creek formations.

21 I need to make clear from the beginning  
22 that -- that we're only dealing with the northeast  
23 quarter here today. Our request for agency action  
24 that was filed in this matter does contain a request  
25 to create temporary spacing for horizontal wells in

1 the remaining quarter sections of Section 19.

2 Because if the board approves our request to create  
3 160-acre drilling in the northeast quarter, that, in  
4 a sense, will viscerate the rule and no other party  
5 will be able to drill a horizontal well in  
6 Section 19.

7 I'm thinking that it would be good to give  
8 the Division a method to administratively approve  
9 future horizontal wells in Section 19. We thought it  
10 might be prudent that the board create a temporary  
11 rule governing those other sections, or other quarter  
12 sections. But the Division's indicated that it  
13 doesn't support that temporary spacing, which  
14 basically renders the issue moot. And -- and we  
15 don't wish to pursue that.

16 We don't have any ownership interest set  
17 aside in the northeast quarter, so I'm essentially  
18 withdrawing that section of our request. The board  
19 can, on its own, with its own authority if it decides  
20 to, create a temporary spacing for the -- that would  
21 be the northwest, the southwest, and the southeast  
22 quarter sections in Section 19. But -- but that's  
23 not something we're going to put evidence on today.  
24 So just so we're clear about that.

25 And -- but we are going to put on evidence

1       regarding the northeast quarter which are the subject  
2       lands, and where MAR/REG and the sister company,  
3       Nathan Oil -- Nathan Oil, LTD, owns interest.

4               MR. JENSEN:   It seems to me, Mr. Chairman,  
5       that it would be appropriate to have Mr. Clawson  
6       prepare a formal withdrawal.   And I don't know quite  
7       what the form is, Mr. Clawson, but -- but withdrawing  
8       those other sections from your request for agency  
9       action so that the record will be clear, and if you  
10      will submit it to the chairman.

11              MR. CLAWSON:   That would be fine.   Or  
12      assuming the board approves today's request, I could  
13      include it in that as well.   It could be a finding  
14      and part of the --

15              MR. MURRAY:   I think either way, but I think  
16      we ought to have it in the record, because right now  
17      you're -- you're on record formally asking for an  
18      adjudication on -- on quarter sections that you don't  
19      have any interest in.

20              MR. CLAWSON:   Right.   And -- and we don't  
21      have any interest in pursuing since the Division --

22              MR. JENSEN:   Right.

23              MR. CLAWSON:   -- doesn't want it either.

24              That would be fine.   That would be a good  
25      way to do it.

1 MR. JENSEN: Okay. Thank you.

2 CHAIRMAN JOHNSON: Thank you.

3 MR. CLAWSON: So with that, I'd like to  
4 introduce my witnesses with me today. To my left is  
5 Tariq -- or Tariq Ahmad, who is MAR/REG's petroleum  
6 engineer, who will testify as to the land and  
7 ownership issues, as well as to reserve calculations  
8 and -- and reservoir economics.

9 And then on my right is Mobashir Ahmad, who  
10 is consulting petroleum geologist working for MAR/REG  
11 who will testify as to the geologic aspects of the  
12 stratigraphic intervals that have been proposed for  
13 spacing today.

14 And with that, I'd ask that the witnesses be  
15 sworn in.

16 CHAIRMAN JOHNSON: (Speaking to court  
17 reporter.) Will you do that, please?

18 COURT REPORTER: Yes.

19  
20 Thereupon --

21 TARIQ AHMAD and MOBASHIR AHMAD,  
22 were called as witnesses, and having been first duly  
23 sworn to tell the truth, the whole truth, and nothing  
24 but the truth, testified as follows:  
25 ///



1           MR. CLAWSON:   Okay.   I'll call my first  
2   witness, Tariq Ahmad.

3           Would you please state your name and address  
4   for the record?

5           TARIQ AHMAD:   It's Tariq Ahmad, 13495 South  
6   Hills Drive, Reno, Nevada 89511.

7           MR. CLAWSON:   And what is your affiliation  
8   with MAR/REG?

9           TARIQ AHMAD:   I am a petroleum engineer for  
10   MAR/REG Oil Company.

11          MR. CLAWSON:   And what are your -- and what  
12   are your principal responsibilities in that position?

13          TARIQ AHMAD:   With MAR/REG, I do all the  
14   petroleum engineering and as well as the land and --  
15   land and assignments and things of that sort.

16          MR. CLAWSON:   Is MAR/REG a Nevada  
17   corporation?

18          TARIQ AHMAD:   Yes, it is.

19          MR. CLAWSON:   Is it in good standing?

20          TARIQ AHMAD:   Yes.

21          MR. CLAWSON:   Where is its principal place  
22   of business?

23          TARIQ AHMAD:   Reno, Nevada.

24          MR. CLAWSON:   And is it qualified to conduct  
25   business in Utah?

1           TARIQ AHMAD:   Yes, it is.

2           MR. CLAWSON:   Okay.   I draw your attention  
3   to Exhibit No. 1.

4           Are you -- have you examined this exhibit  
5   and are you familiar with it?

6           TARIQ AHMAD:   I have.

7           MR. CLAWSON:   Could you please point out  
8   where the Squaw Canyon Field is?

9           TARIQ AHMAD:   It's on this map.   It's  
10   labeled as Squaw Canyon, and it's around -- in the  
11   blank -- right around the Blanding area, right there  
12   to the southeast (indicating).

13          MR. CLAWSON:   Now, I call your attention to  
14   Exhibit No. 2.

15                         (Exhibit 2 was discussed.)

16          MR. CLAWSON:   Have you examined this exhibit  
17   and are you familiar with it?

18          TARIQ AHMAD:   Yes, I have.

19          MR. CLAWSON:   What is this exhibit and what  
20   does it tell us?

21          TARIQ AHMAD:   This exhibit, I got this from  
22   the report done by the Utah Geological Survey.   And  
23   this report -- this map shows location of all of the  
24   oil and gas fields in the southeast area of Utah, but  
25   what it also shows, if you look at it closely, it

1 shows the trains of all the fields are going  
2 northwest, southeast, and that's the general area  
3 that we are interested in.

4 MR. CLAWSON: Could you please provide us  
5 with a brief history of the Squaw County Field and  
6 this development?

7 TARIQ AHMAD: Yeah, Squaw Canyon Field was  
8 discovered in 1979 by using seismic, by MC Oil  
9 Company, McCulloch Oil Corporation. The first well  
10 drilled there was the Federal 1-19. It was tested in  
11 the Desert Creek formation. When it came in, its  
12 initial production rate was over 500 barrels a day.  
13 There was no natural gas pipeline to the field at  
14 that -- back at that time, so they had to compress  
15 the gas and take it to -- by truck to some pipeline  
16 area.

17 Thereafter, the additional wells were  
18 drilled in the same area to delineate this field.  
19 Most of the -- I think all the wells were plugged  
20 except for the 3-19. But over the years, what's  
21 happened is the 1-19 well had two holes in the  
22 casing. And because of the holes in the casing,  
23 they -- the previous operators, they cemented the  
24 holes and put the well back in production and came  
25 back online and did pretty well. But then they had

1 another hole and the same cement squeeze job failed,  
2 so they had the same problem.

3 When we took over the field, we put a packer  
4 in the hole to test the lower zones, but I don't  
5 think that worked out too well. So now we are  
6 pulling -- we pulled everything out. We're going to  
7 do another cement squeeze in that well and try to put  
8 it back online. It's not that the reservoir has  
9 problems, it's the holes in the casing uphold.

10 The 3-19 is producing also from the Desert  
11 Creek and Ismay formation. And it's -- it's  
12 basically now doing about 5 to 6 barrels a day with  
13 hardly any water production.

14 What we did was after we had studied this  
15 field. We also operate a field next door to this.  
16 It is called the Tin Cup field, which was discovered  
17 by Marathon Oil Company. And in between, back in  
18 2000, I think 2005-2005, Department of Energy had  
19 given a grant to Utah Geological Survey to do a study  
20 on algal mound fields in this area. And that study  
21 basically stated that there is a lot of fields in  
22 this area which will be abandoned unless something is  
23 done. And they recommended drilling horizontal  
24 wells, to -- to get additional oil from -- from the  
25 same fields.

1           Most of the fields are just one well to ten  
2   well fields, averaging between 700,000 and 2.5  
3   million barrels in recoverable. And so based on the  
4   Utah Geological Survey report and the Department of  
5   Energy, we studied the fields and came to the same  
6   conclusion that in order to increase the ultimate  
7   recovery, you must drill horizontal wells.

8           MR. CLAWSON: Is the Snow -- or I mean, I'm  
9   sorry, the Squaw Canyon field an algal mound feature?

10          TARIQ AHMAD: Yes.

11          MR. CLAWSON: Could you please explain the  
12   general purpose behind today's spacing proceeding?

13          TARIQ AHMAD: Okay. The two wells which are  
14   currently there, one is producing the 3-19 and the  
15   1-19, after we looked at it, we saw what the -- how  
16   much oil is in that area. The only way to increase  
17   your ultimate recovery was to drill a horizontal  
18   well. These -- this particular field is basically  
19   producing from fractures. And with the vertical  
20   well, you're not going to get the drainage that you  
21   should be getting. We have had pretty good success  
22   with Questar, for example, up in the Brandon Bottoms  
23   area where we are partners with them, where they have  
24   drilled a lot of horizontal wells in -- in basically  
25   a very minimal stripper oil field and had great

1 success.

2 So similarly, in this area, we feel that if  
3 we were to drill a horizontal well, he can drain both  
4 the upper Ismay and the Desert Creek from a single --  
5 single well bore with two laterals and take -- drain  
6 the whole 160 acres from -- from that one well. And  
7 at the same time, produce by gravity drainage, off  
8 the two well bores which are there.

9 MR. CLAWSON: So MAR/REG intends to continue  
10 producing the vertical wells, even if it drills the  
11 horizontal well?

12 TARIQ AHMAD: Yes, it does.

13 MR. CLAWSON: And will you commingle the  
14 production, the horizontal well and the two different  
15 intervals, will you commingle that production?

16 TARIQ AHMAD: Yes.

17 MR. CLAWSON: Okay. Now I refer you to  
18 Exhibit No. 3.

19 (Exhibit No. 3 was discussed.)

20 MR. CLAWSON: Have you examined this exhibit  
21 and are you familiar with it?

22 TARIQ AHMAD: I have.

23 MR. CLAWSON: Can you please tell us what  
24 this shows?

25 TARIQ AHMAD: This well shows the ownership

1 with this -- this Exhibit shows the ownership in  
2 Section 19 and surrounding areas and what -- which  
3 section -- which parts are on lease, for example. In  
4 Section 19, the northwest quarter is unleased and so  
5 is the southeast quarter.

6 The northeast and the southwest quarters are  
7 on the same lease. You --

8 (School bell sounding.)

9 (Clarification by court reporter.)

10 THE WITNESS: I'm saying the northeast  
11 quarter and the southwest quarter are on the same  
12 lease and section land.

13 MR. CLAWSON: And what is that lease number?

14 TARIQ AHMAD: U40401.

15 MR. CLAWSON: Who owns the minerals in --  
16 under the -- under the lease?

17 TARIQ AHMAD: U.S. Government.

18 MR. CLAWSON: And is the northeast quarter  
19 of Section 9, Township 25 East, Range 26 -- I mean,  
20 Township 25 South Ranch 26 East -- I'm saying this  
21 wrong.

22 What -- can you give us the legal  
23 description of the subject lands?

24 TARIQ AHMAD: Section 19, Township 38 South,  
25 Range 26 East.

1           MR. CLAWSON:   And -- and -- but who owns  
2   the -- the surface?

3           TARIQ AHMAD:   United States.

4           MR. CLAWSON:   Okay.   Now, I would refer you  
5   to Exhibit 18.

6                         (Exhibit 18 was discussed.)

7           TARIQ AHMAD:   Yes, sir.

8           MR. CLAWSON:   Which is labeled ownership  
9   interests.

10          TARIQ AHMAD:   Right.

11          MR. CLAWSON:   Have you examined this exhibit  
12   and are you familiar with it?

13          TARIQ AHMAD:   I have and I am familiar with  
14   it.

15          MR. CLAWSON:   And -- and what does this  
16   exhibit tell us?

17          TARIQ AHMAD:   It tells us the ownership of  
18   Section 19.

19          MR. CLAWSON:   All of the ownership?

20          TARIQ AHMAD:   Yes.

21          MR. CLAWSON:   Who owns the -- the -- who are  
22   the leasehold owners in the northeast corner of  
23   Section 19?

24          TARIQ AHMAD:   The record title is owned by  
25   QEP Energy and Exxon Mobil, 50 percent.   And the



1 operator rights are owned by Nathan Oil, LLC, and --  
2 75 percent, and QEP Energy, 25 percent.

3 MR. CLAWSON: And is MAR/REG associated with  
4 Nathan Oil?

5 TARIQ AHMAD: Yes, they're associated  
6 companies.

7 MR. CLAWSON: And QEP Energy company owns  
8 the 25 percent working interest in the subject lands?

9 TARIQ AHMAD: Yes.

10 MR. CLAWSON: Or corroborating rights?

11 TARIQ AHMAD: Yes.

12 MR. CLAWSON: Does QEP support MAR/REG's  
13 request in spacing for the northeast quarter?

14 TARIQ AHMAD: Yes. I have talked to QEP's  
15 Donald Chavez, and I sent him all the documents and I  
16 got their support for this.

17 MR. CLAWSON: Is the northeast quarter  
18 subject to a voluntary pooling agreement?

19 TARIQ AHMAD: It's subject to a joint  
20 operating agreement.

21 MR. CLAWSON: And is that joint operating  
22 agreement Exhibit 16?

23 TARIQ AHMAD: Yes, it is.

24 MR. CLAWSON: Have you examined and are you  
25 familiar with Exhibit 16?

1                   TARIQ AHMAD:   Yes.

2                   MR. CLAWSON:   And you've already testified,  
3                   the BLM, or the Federal Government owns the surface  
4                   of the federal lands.

5                   Who administers the minerals and that sort  
6                   of thing?

7                   TARIQ AHMAD:   The BLM.

8                   MR. CLAWSON:   Okay.   Now, I would refer you  
9                   to Exhibit No. 17.

10                   (Exhibit No. 17 was discussed.)

11                   MR. CLAWSON:   Okay.   Is this the request for  
12                   agency action that has been involved in this cause?

13                   TARIQ AHMAD:   Yes.

14                   MR. CLAWSON:   Towards the back of the  
15                   request, there is a list of names and addresses.

16                   Is this a certificate of mailing for request  
17                   for agency action?

18                   TARIQ AHMAD:   Yes, it is.

19                   MR. CLAWSON:   And what does it show?

20                   TARIQ AHMAD:   It shows every entity that was  
21                   sent a copy of this notice.

22                   MR. CLAWSON:   So the owners, operators and  
23                   surface owners for Section -- I mean, the northeast  
24                   quarter section?

25                   TARIQ AHMAD:   Yes.

1           MR. CLAWSON:   And how did you determine  
2   which parties to include on that list?

3           TARIQ AHMAD:   That was from the state office  
4   for the Bureau of Land Management, and they had all  
5   the ownership records.

6           MR. CLAWSON:   Was the request for agency  
7   action mailed to everyone on this list?

8           TARIQ AHMAD:   Yes.

9           MR. CLAWSON:   Okay.   Now I'd just refer you  
10   back to Exhibits 1, 2, 3, 16, 17 and 18.

11           Are these documents that -- that are  
12   contained in MAR/REG's business files, or were they  
13   prepared by MAR/REG in connection with this  
14   proceeding or in the regular course of MAR/REG's  
15   business activities?

16           TARIQ AHMAD:   Yes.

17           MR. CLAWSON:   Okay.   That's the end of my  
18   questions for Mr. Ahmad at this moment.

19           I would move that Exhibits 1, 2, 3, 16, 17  
20   and 18 be admitted.

21           CHAIRMAN JOHNSON:   Mr. Donaldson?

22           MR. DONALDSON:   The Division does not object  
23   to the admission of the exhibits, however, we have  
24   some questions.

25           CHAIRMAN JOHNSON:   Okay.

1 Does the board have any objections?

2 MR. JENSEN: I noticed when you were having  
3 some problems with that legal description on your  
4 Exhibit 3, you want to -- shall I read it in the  
5 record for you, Mr. Clawson?

6 It needs to say Township 26 East, Range 38  
7 South at the top of the exhibit so that there's  
8 not -- not any misunderstanding.

9 MR. CLAWSON: I thank you for that. That's  
10 helpful. I -- it's the township next to it is 25  
11 East, so I was reading through the townships.

12 MR. JENSEN: So it should be Township 26  
13 East, Range 38 South.

14 MR. CLAWSON: Exactly. Thank you.

15 MR. JENSEN: Okay.

16 CHAIRMAN JOHNSON: Well, I think it's  
17 showing the left side of the page is Township --

18 MR. QUIGLEY: Twenty-five.

19 CHAIRMAN JOHNSON: -- Range 25 East. And  
20 then the right-hand side is 26 East.

21 MR. CLAWSON: Right.

22 CHAIRMAN JOHNSON: Okay. Are there any  
23 objections?

24 MR. JENSEN: I see -- I see what's  
25 happening.

1 MR. CLAWSON: Should be a line.

2 CHAIRMAN JOHNSON: Yeah, a Township line,  
3 Range line.

4 Okay. So Exhibits 1, 2, 3, 16, 17, 18 are  
5 admitted.

6 Mr. Clawson?

7 MR. CLAWSON: That's all the questions I  
8 have for this witness.

9 CHAIRMAN JOHNSON: Okay. Mr. Donaldson?

10 MR. DONALDSON: First of all I wanted to  
11 just ask, was Mr. Ahmad providing expert testimony?

12 MR. CLAWSON: No, he's a fact witness.

13 MR. DONALDSON: Okay.

14 MR. CLAWSON: I didn't ask him any opinions.

15 MR. DONALDSON: Okay. Then the staff  
16 members have some questions they want to pose to  
17 Mr. Ahmad.

18 CHAIRMAN JOHNSON: Okay. Mr. Doucet?

19 MR. DOUCET: Dustin Doucet, petroleum  
20 engineer for the division.

21 I've got a few questions here. I had a  
22 question maybe you can clear up for me. On Exhibit 3  
23 and Exhibit 18, I think it shows that it's -- that  
24 the northeast quarter and the southwest quarter are  
25 one lease; is that correct?

1                   TARIQ AHMAD: That's correct, yes.

2                   MR. DOUCET: And I believe, Mr. Clawson,  
3                   didn't you say the only ownership in your opening  
4                   testimony was the northeast quarter that you guys  
5                   had?

6                   MR. CLAWSON: That's correct.

7                   MR. DOUCET: So you don't have the entire  
8                   lease?

9                   TARIQ AHMAD: That's correct.

10                  MR. DOUCET: Just a portion of the lease.  
11                  And that JOA is for the northeast quarter?

12                  TARIQ AHMAD: That's correct.

13                  MR. DOUCET: Okay.

14                  MR. CLAWSON: Well, I --

15                  TARIQ AHMAD: At least. At least.

16                  MR. DOUCET: On Exhibit 18, that difference  
17                  in ownership, the stratigraphic interval, 5612 --  
18                  5612 feet, is that -- is the 5612 and below, is that  
19                  the Desert Creek or is everything included in that  
20                  upper interval?

21                  TARIQ AHMAD: Everything is included above  
22                  5612. The way it was done was when the 1-19 was  
23                  drilled, it was drilled down to that depth. So they  
24                  earned everything to that point.

25                  MR. DOUCET: Okay.

1 MR. CLAWSON: I think as a matter of  
2 clarification, are both the Upper Ismay and the  
3 Desert Creek formation above 5612 in that?

4 TARIQ AHMAD: Yes.

5 MOBASHIR AHMAD: Yes.

6 MR. DOUCET: I think that's all the  
7 questions I had.

8 MR. DONALDSON: No more questions for this  
9 witness.

10 CHAIRMAN JOHNSON: Thank you, Mr. Donaldson.  
11 Does the board have questions?

12 MR. HAROUNY: I have a couple questions for  
13 Mr. Ahmad.

14 Mr. Ahmad, good to see you after so long.  
15 The operating agreement is between MAR/REG as the  
16 operator and who are the non operators?

17 TARIQ AHMAD: At this point, it's QEP  
18 Energy. Questar.

19 MR. HAROUNY: Questar.

20 TARIQ AHMAD: And Nathan Oil.

21 MR. HAROUNY: So this operating agreement is  
22 the original operating agreement, and you are pretty  
23 much the successor operator?

24 TARIQ AHMAD: That's correct.

25 MR. HAROUNY: Is -- is MAR/REG an owner in

1 the lease or the well?

2 TARIQ AHMAD: No.

3 MR. HAROUNY: The -- the owner is 75 percent  
4 Nathan Oil?

5 TARIQ AHMAD: That's correct.

6 MR. HAROUNY: And did you have any -- do you  
7 have their consent in writing to proceed with this.

8 TARIQ AHMAD: I'm the managing partner of  
9 Nathan Oil. I've given all of my consent.

10 MR. HAROUNY: Okay. But you have it as a  
11 matter of documentation?

12 TARIQ AHMAD: You mean in the record?

13 MR. HAROUNY: Yes.

14 MR. CLAWSON: We haven't included it.

15 MR. HAROUNY: Since MAR/REG is not an owner?

16 MR. CLAWSON: Well, it's the operator, and  
17 it's the designated operator by the owner. So it's  
18 the party that has the right to produce and develop  
19 it.

20 MR. HAROUNY: Develop the property.

21 But you see what I'm saying? There's a --

22 MR. CLAWSON: Well, we haven't -- you know,  
23 we haven't included all of the documentation that  
24 draws the line in between the original parties and  
25 MAR/REG as the operator.



1           MR. HAROUNY:   Correct.

2           MR. CLAWSON:   But I can have my witness --

3           MR. HAROUNY:   The operating agreement

4           doesn't have MAR/REG's name, so --

5           MR. CLAWSON:   Correct.   It's an old

6           operating agreement, but it covers the subject lines

7           and there's no dispute as to that.

8           TARIQ AHMAD:   I'm pretty sure you're

9           familiar with it.   When you operated for me, you

10          operated under Graham Energy.

11          MR. HAROUNY:   Right.   I understand.   But the

12          records don't show that MAR/REG is the operator --

13          the operating agreement doesn't show that MAR/REG is

14          the current operator.

15          MR. CLAWSON:   Okay.   Well, I think we can

16          correct that with his testimony.

17          MR. HAROUNY:   I'm just trying to get the

18          record straight.

19          The -- I had another question, but that had

20          to do with the stratigraphic equivalent.   Is there

21          a -- a analog log well or a well or equivalent to a

22          certain geological formation for that -- for the

23          depth limitation?

24          TARIQ AHMAD:   You mean the 5612?

25          MR. HAROUNY:   Uh-huh.

1           TARIQ AHMAD: That's the bottom of the  
2     Desert Creek. That's when they drill through it,  
3     that's when they hit the TD, and that's with the --  
4     they earned the rights.

5           MR. HAROUNY: Does it say to the base of  
6     Desert Creek?

7           MR. CLAWSON: No. No. It's a specific --  
8     the spaced interval, which is a fine permit.

9           MR. HAROUNY: It's a specific depth.

10          MR. CLAWSON: Are you talking about the  
11     assignment?

12          MR. HAROUNY: I'm talking about if the  
13     location of the new well ends up being on top of a  
14     mountain, does he get to the base of Desert Creek or  
15     not?

16          TARIQ AHMAD: Okay. I understand what  
17     you're saying. It's a specific depth. It -- the  
18     assignments -- that's a really good question. The  
19     assignments for -- to a specific depth, and we are  
20     going to be drilling. And it's a couple hundred feet  
21     below that particular zone. And the 3-19, for  
22     example, which is the well, I think, directly  
23     northeast of the 1-19, it is about 300 feet above on  
24     the side a mountain.

25          MR. HAROUNY: So that's what I'm trying

1 to --

2 TARIQ AHMAD: Right.

3 MR. HAROUNY: All I see here is a specific  
4 number, no equivalency, no to the base of such and  
5 such formation.

6 MR. CLAWSON: I -- I -- I appreciate your  
7 line of questioning, but I'm not sure that it's  
8 actually germane to the spacing proceeding. Because  
9 we're talking about a very specific interval in the  
10 Desert Creek formation, which is above, you know, I  
11 don't know how high. We will have testimony as to  
12 the stratigraphic units, but -- but the ownership  
13 beneath -- we're talking about two zones.

14 MR. HAROUNY: Correct.

15 MR. CLAWSON: The Upper Ismay and the Desert  
16 Creek, and they're both defined in the agency action,  
17 and that's what we're asking for to space. We're not  
18 dealing with anything below the Desert Creek  
19 interval. So the assignments and the ownership  
20 interests beneath these stratigraphic intervals may  
21 be important to MAR/REG and its dealings with its  
22 partners and whatnot in terms of what it can earn and  
23 that type of affair, but it's not really part of --  
24 we're not asking that the board do anything  
25 beneath --

1           TARIQ AHMAD: Well, I think I can answer  
2 your question.

3           MR. HAROUNY: Okay, I'm just --

4           TARIQ AHMAD: I just read this again, and  
5 the way this is written, there's a stratigraphic  
6 interval on the surface of 5612. So whatever that  
7 interval is at 5612, you can correlate it on  
8 geologic -- I mean log wise to another section. I  
9 mean, it's a marker and -- and it can't be that  
10 difficult to correlate.

11          MR. HAROUNY: The markers usually say  
12 equivalent to Section 5612 and --

13          TARIQ AHMAD: No, stratigraphic intervals.  
14 So that geologically would mean a specific interval  
15 at that depth, whatever is that equivalent in that --  
16 in that quarter section, whatever -- wherever we did  
17 drill, we can have that equivalency on the other  
18 wells. It's not on the surface --

19          MR. HAROUNY: For --

20          TARIQ AHMAD: I know what you're saying.  
21 You're saying if the depth was 500 feet off, you  
22 would miss the whole thing. But if it's -- since the  
23 assigning says stratigraphic interval, that is fine,  
24 then the -- it can be adjusted for that depth.

25          MR. HAROUNY: I have no other question.

1                   CHAIRMAN JOHNSON: Other questions for  
2 Mr. Ahmad?

3                   (No response).

4                   Okay. Thank you.

5                   Mr. Clawson?

6                   MR. CLAWSON: I'd like to ask a few  
7 questions on redirect.

8                   CHAIRMAN JOHNSON: Go ahead.

9                   MR. CLAWSON: Just to clarify the record.  
10 You previously testified that Nathan Oil,  
11 LTD, owns the minerals beneath the subject lands?

12                  TARIQ AHMAD: It's Nathan Oil, LLC.

13                  MR. CLAWSON: LLC?

14                  TARIQ AHMAD: Yes, sir.

15                  MR. CLAWSON: Oh, I'm sorry. What is the  
16 relationship in between Nathan Oil and MAR/REG?

17                  TARIQ AHMAD: They are related companies. I  
18 am the managing partner of Nathan Oil.

19                  MR. CLAWSON: And is MAR/REG the designated  
20 operator for these two -- well, for Nathan Oil's  
21 interest within the subject lands?

22                  TARIQ AHMAD: Yes, it is.

23                  MR. CLAWSON: Okay. So that's all the  
24 questions I have on redirect.

25                  CHAIRMAN JOHNSON: Okay. Thank you,

1 Mr. Ahmad and Mr. Clawson.

2 Go ahead.

3 MR. CLAWSON: Thank you. Now I'd like to  
4 call my second witness.

5 Would you please state your name and address  
6 for the Board?

7 MOBASHIR AHMAD: Mobashir Ahmad, 12805  
8 Thomas Creek Road, Reno, Nevada 89501.

9 MR. CLAWSON: What is your affiliation with  
10 MAR/REG.

11 MOBASHIR AHMAD: I'm a full-time employee of  
12 Pacific Engineering and Mining, and MAR/REG is an  
13 affiliated company.

14 MR. CLAWSON: And are you here today in the  
15 capacity of a consulting geologic petroleum  
16 geologist?

17 MOBASHIR AHMAD: Well, I am an employee of  
18 Pacific Engineering, so I'm in the field and -- yes,  
19 I guess.

20 MR. CLAWSON: So you're petroleum --

21 MOBASHIR AHMAD: Yes, correct.

22 MR. CLAWSON: Could you please tell us --  
23 well, what are your principal responsibilities in  
24 that capacity?

25 MOBASHIR AHMAD: Basically, what I do is I

1 look at mainly oil fields that have problems in this  
2 geographic columns and look at the vent logs  
3 extensively to see what volumes that existed and to  
4 remedy such problems. That's one of my jobs that  
5 concerns this testimony.

6 MR. CLAWSON: Okay. Could you please  
7 briefly run through your education and experience?

8 MOBASHIR AHMAD: Yeah, I have my bachelor's  
9 in geophysical engineering at Colorado School of  
10 Mines in 1983.

11 COURT REPORTER: I'm sorry. Could you slow  
12 down just a little bit?

13 MOBASHIR AHMAD: My bachelor's is in  
14 geophysical engineering from Colorado School of Mines  
15 in 1983. And I have a master's in metallurgical  
16 engineering from MacKay School of Mines, University  
17 of Nevada, Reno, 2000. And basically, I've worked in  
18 the oil and gas industry since basically in college,  
19 but full-time since like 1986.

20 MR. CLAWSON: Are you familiar with the  
21 Squaw Canyon Field in the Upper Ismay and Desert  
22 Creek Reservoir?

23 MOBASHIR AHMAD: Yes, I am.

24 MR. JENSEN: May I ask, doesn't he --  
25 doesn't he need to be qualified as an expert since

1       he's --

2               MR. CLAWSON:   That's what I'm trying to do.

3               MR. JENSEN:   Yeah, I -- well, do you need to  
4       get into this to get him to qualify?   It seems to me  
5       you've probably got to qualify him on something else  
6       and then let him go.

7               MR. CLAWSON:   Well, typically, an expert  
8       witness is qualified to testify as an expert based on  
9       education and/or experience.

10              MR. JENSEN:   Well, before you get into  
11      this -- that's where I'm going.   Before you get into  
12      this specific issue as here, it seems to me, I think  
13      you're about there, maybe you just ought to move to  
14      have him qualified, be treated as an expert witness.

15              MR. CLAWSON:   That was actually my next  
16      question.

17              MR. JENSEN:   Okay.   Thanks.

18              MR. CLAWSON:   What I wanted to do, I mean,  
19      first of all --

20              MR. JENSEN:   I'm clairvoyant.

21              MR. CLAWSON:   Okay.   He -- he has worked as  
22      a petroleum geologist in the industry for 30 years.  
23      And based on that, he's an expert in the field.   I  
24      also generally like to provide some foundation for  
25      his testimony when it comes to the Squaw Canyon



1 Field, and that was the nature of that last question  
2 I asked.

3 I'm not really asking -- I'm -- I mean, I'm  
4 not going to ask that he be qualified as an expert in  
5 the Squaw Canyon Field, it's going to be more  
6 general.

7 MR. JENSEN: Okay.

8 MR. CLAWSON: But I -- I appreciate that.  
9 That was actually my next question.

10 MR. JENSEN: Thank you.

11 MR. CLAWSON: I'd ask the Board recognize  
12 Mr. Ahmad as an expert for purposes of geology and  
13 geological interpretations for purposes of today's  
14 hearing.

15 CHAIRMAN JOHNSON: Mr. Donaldson?

16 MR. DONALDSON: We would like some more  
17 information about Mr. Ahmad's petroleum geology  
18 experience before we -- I mean --

19 CHAIRMAN JOHNSON: Do you have any specific  
20 questions, Mr. Donaldson?

21 MR. DONALDSON: Yes, could you -- could you  
22 discuss your petroleum geology experience?

23 MOBASHIR AHMAD: Yes. I've worked for --  
24 actually, Kaplinger & Associates was my position, and  
25 there we managed and assessed research for

1     third-party clients, including Minoco and Minson Oil  
2     Company.

3             And thereafter, like I said, since 1986,  
4     I've been working for Pacific Energy & Mining  
5     Company. So not all of those years were in petroleum  
6     engineering. Some of them was -- were in mining  
7     engineering. I'm a registered mining engineer in  
8     Pakistan. I'm an enviromental manager in the state  
9     of Nevada.

10            But as far as petroleum is concerned, we  
11     have also worked on the Cisco field, the Tin Cup Mesa  
12     Field, and currently, I'm working on the Delta  
13     Petroleum Green Town -- Green River Field.

14            So if you have any specific questions  
15     that -- that you'd like an answer, like --

16            MR. DONALDSON: Could you discuss a little  
17     bit the type of work you do specifically, in terms of  
18     petroleum geology, or you have done?

19            MOBASHIR AHMAD: Yeah. Basically, what I  
20     look at, and what I have done is look -- I look at  
21     the old oil fields is my main concern. And  
22     basically, what I look at there is what has the other  
23     company done wrong, for example, and what areas they  
24     have missed, what lateral continuity there is, and  
25     that's about it.

1           MR. CLAWSON: Do you examine well lots?  
2           THE WITNESS: Yes, I do.  
3           MR. CLAWSON: Do you examine geological  
4 maps?  
5           MOBASHIR AHMAD: Yes.  
6           MR. CLAWSON: Do you do geological  
7 interpretation?  
8           THE WITNESS: Yes, I do.  
9           MR. DONALDSON: Okay. We don't have any  
10 objection.  
11           CHAIRMAN JOHNSON: Does the board have any  
12 questions or objections?  
13                    (No response.)  
14           Okay. Then we will recognize Mr. Ahmad as  
15 an expert as you have requested for purposes of the  
16 hearing.  
17           MR. CLAWSON: Okay. Thank you very much.  
18           Now I would refer you to Exhibit No. 4. Are  
19 you -- have you examined this exhibit and are you  
20 familiar with it?  
21                    (Exhibit 4 was discussed.)  
22           MOBASHIR AHMAD: Yes, I have. Exhibit 4 is  
23 a reference section. And that is, again, from the  
24 final report of Utah Geological Survey.  
25           MR. CLAWSON: Could you please describe the

1 Upper Ismay and the Desert Creek formations in the  
2 vicinity of the Squaw Canyon Field?

3 MOBASHIR AHMAD: The Upper Ismay and Desert  
4 Creek are part of the Paradox Basin, which was  
5 basically formed around 300 million years ago with  
6 continental collisions between North America and  
7 maybe South America and Africa, or a mid-continental  
8 collision. Thereafter, the old ancestor Rockies  
9 uplifted and the Paradox Basin was born through such  
10 sites.

11 And there are basically two parts of the --  
12 of this particular basin. And we are concerned with  
13 our fields, is in the planning sub basin. And this  
14 particular field is right at the boundary line  
15 between the north -- northeastern part and the  
16 southwestern part. And the northeastern part is the  
17 Upper Ismay formation -- producing formations, and  
18 the southwestern part is the Desert Creek. So this  
19 is like a critical junction.

20 But as far as Upper Ismay is concerned, the  
21 basic algal mound, shallow sea formations, and Desert  
22 Creek is basically near shore linear features.  
23 There -- and essentially, other than that, if you are  
24 in Upper Ismay and Desert Creek, what can I say?  
25 Upper Ismay is basically mostly limestone with some

1 variation of dolomite and limestone. And the Desert  
2 Creek is mostly dolomite. And I can give you some  
3 averages. Like, it's not exactly limestone.

4 Like, you know, our particular 1-19, the  
5 three initial zones that are producing. The first  
6 zone, I should not go into depth, it's 11 feet. The  
7 second zone is six feet. The third zone is six feet.  
8 And there is some interpretation as to exactly, you  
9 know, that the discrimination of the said zones.

10 But the top zone is like 76 percent  
11 dolomite, balance is limestone. So I don't need to  
12 mention that. Second zone is 37 percent dolomite,  
13 and the bottom zone is 74 percent dolomite. So these  
14 are not entirely homogeneous formations. They are  
15 somewhat mixed formations. With how we define the  
16 producing zone is through basic porosity and  
17 permeability. And the bottom of Desert Creek is  
18 basically -- it's both of these formations are  
19 separated by an impermeable layer and hydrite. So  
20 then they are both considered separate zones. And  
21 that's about it.

22 MR. CLAWSON: When you are talking about  
23 these zones, are -- have you examined the request for  
24 agency action?

25 MOBASHIR AHMAD: Yes, I have.

1           MR. CLAWSON: And when you're talking about  
2 these separate zones, are these the same as the  
3 spaced intervals that are described in the request  
4 for agency action?

5           MOBASHIR AHMAD: Yes, they are.

6           MR. CLAWSON: Okay.

7           MOBASHIR AHMAD: I can give you the, you  
8 know, the depths and information.

9           MR. CLAWSON: Well, you can -- if -- to save  
10 time, I mean, I think we can just do it by reference  
11 to the request for agency action.

12          MOBASHIR AHMAD: I would like to clarify  
13 though one thing.

14          MR. CLAWSON: Okay. Well then do that.

15          MOBASHIR AHMAD: That was our board member's  
16 question, Mr. Jake's. For agency action, we are  
17 requesting properties being from about 5250 to 5400  
18 kelly bushing. And kelly bushing is technically  
19 aboveground, so that makes it basically 5240 to 5390,  
20 which is -- which basically -- let me make sure this  
21 is correct -- which is basically minus 234 to minus  
22 384 sea level. Okay? This is for the Upper Ismay.

23               As far as the Desert Creek is concerned, the  
24 agency action was 5480 to 5580 kelly bushing. Again,  
25 10 feet difference is 5470 to 5470 -- yeah -- to

1 5570. Excuse me. And the sea level depths are 464  
2 to 564 below sea level. So that should clarify the  
3 exact intervals.

4 MR. CLAWSON: Okay. Are there any other  
5 important parameters about the spaced intervals, the  
6 Upper Ismay and the Desert Creek, that you wish to  
7 discuss? You had talked about porosity.

8 MOBASHIR AHMAD: Yeah, the porosity is  
9 basically, in the Upper Ismay, the average porosity  
10 is around 14 percent. And the permeability in the  
11 same formation varies all over the place. You go  
12 from test -- let's say point half percent to -- or  
13 immediate arrivals to four, five. But the average  
14 calculation was like 1.4 and that's like in reference  
15 to calculation. I think everything is submitted on  
16 the exhibits. The permeability of the Desert Creek  
17 is around 16 percent. And let's see. What else?

18 MR. CLAWSON: Percent or --

19 TARIQ AHMAD: You mean the porosity is 16  
20 percent.

21 MOBASHIR AHMAD: Yes, correct. Oh, excuse  
22 me. The permeability is definitely not.

23 Other than that, let me do bring in one  
24 thing, so this will clarify. You wanted to see what  
25 the -- what the differentiated --

1           There is basically a seal between -- or on  
2 both the formations so the oil does not escape, and  
3 the oil originates from the shale.

4           MR. CLAWSON: So your -- so the two  
5 different intervals are separate and distinct?

6           MOBASHIR AHMAD: Correct.

7           MR. CLAWSON: Okay. Now, I'd refer you to  
8 Exhibit No. 10.

9                     (Exhibit 10 was discussed.)

10           Have you exhibit -- Exhibit 10, are you  
11 familiar with it?

12           MOBASHIR AHMAD: Yes.

13           MR. CLAWSON: Could you please describe this  
14 exhibit for -- for the board?

15           MOBASHIR AHMAD: Exhibit 10 is basically,  
16 let's say, Upper Ismay carbonate structure map that  
17 tells you the sea level depths and how far below sea  
18 level most of the Upper Ismay is below the said -- we  
19 are looking at Section 19, and the scale on it can be  
20 found not very easily, but the quarter section is  
21 right in the center. So that's 2640, or whatever  
22 half of 5280 is, I think it is.

23           And -- let's see, it also shows the proposed  
24 location. It shows you the concerned wells, 1-19, or  
25 19-1 and 3-19. It incorrectly shows the 1019



1 Federal -- it calls it the Chambers. That's not  
2 called the Chambers on the DOGN. It's called Squaw  
3 Canyon Federal 1019 and it shows as a producing well,  
4 all production. This was plugged and abandoned.

5 It also shows McCulloch 19-2, and that's --  
6 I think that's -- yeah, that is -- it's Federal 19-2  
7 now, and that is also a plugged and dry well.

8 And what it does not show is the Three  
9 Amigos well. And Three Amigos well is somewhere, if  
10 you draw -- well, let's see. Federal 19-2 is 150  
11 feet from the north line, and Three Amigos is 715  
12 feet from the north line. And it's -- if you connect  
13 a line between 19-2 and 3-19, it should be somewhere  
14 along -- along that line. And that was also a dry  
15 hole.

16 MR. JENSEN: That would be to the east then  
17 on that --

18 MOBASHIR AHMAD: Yes.

19 CHAIRMAN JOHNSON: Let's -- let's back up a  
20 little bit here.

21 MOBASHIR AHMAD: Okay.

22 CHAIRMAN JOHNSON: Okay. First of all,  
23 where did this map come from?

24 MOBASHIR AHMAD: Oh, this comes from  
25 Marathon and McCulloch Oil Company.

1                   CHAIRMAN JOHNSON:   Okay.

2                   MOBASHIR AHMAD:   And this is --

3                   CHAIRMAN JOHNSON:   And is it a portion of a  
4   larger map?

5                   MOBASHIR AHMAD:   Yes, it is.

6                   CHAIRMAN JOHNSON:   And do you know the name  
7   of the larger map that it came from?

8                   MOBASHIR AHMAD:   This is their internal  
9   study.  It's not for publication, but we can send you  
10   a record if you wish.

11                  CHAIRMAN JOHNSON:   Okay.  Now, the -- the  
12   Chambers 16-18 Federal well that is in the northeast  
13   portion of this map.

14                  MOBASHIR AHMAD:   Yeah, Squaw Canyon.

15                  CHAIRMAN JOHNSON:   You say that's  
16   incorrectly identified?

17                  MOBASHIR AHMAD:   No.  No.  That's -- there's  
18   six -- there's six -- the -- that's -- these things  
19   are labeled incorrectly.  Okay?  There's no such  
20   thing as Chamber 16-18 upon the records.  It's called  
21   Squaw Canyon Federal 16-18.

22                  MR. CLAWSON:   Go slow.

23                  MOBASHIR AHMAD:   All right.

24                  CHAIRMAN JOHNSON:   Okay.  So the -- so the  
25   Chamber 1618 Federal well on the northeast part of

1 the map --

2 MOBASHIR AHMAD: Uh-huh.

3 CHAIRMAN JOHNSON: -- is actually the Squaw  
4 Canyon?

5 MOBASHIR AHMAD: Correct.

6 CHAIRMAN JOHNSON: Squaw Canyon, what  
7 number?

8 MOBASHIR AHMAD: Hang on. This should be --

9 MR. HAROUNY: Which well is that?

10 CHAIRMAN JOHNSON: This one.

11 MOBASHIR AHMAD: Oh, I only have two here,  
12 which is, let's see, make sure this DD 5605. I don't  
13 think there is such a -- there is some -- yes. I  
14 cannot locate that according to my -- according to my  
15 records. Yeah, I have another summary sheet, which  
16 is Exhibit 19.

17 MR. CLAWSON: Well, we haven't gotten to  
18 that yet.

19 MOBASHIR AHMAD: Okay. And in Section 18,  
20 we have two wells, one of which is in the -- let's  
21 see -- I do not see Chamber 1618 anywhere. But  
22 that's outside the subject matter, and we're not  
23 really handling that. The only thing we're concerned  
24 about in this particular -- or in my testimony is  
25 between 1-19 and 3-19.

1 COURT REPORTER: I'm sorry. 1-19 and 3-19,  
2 and what did you say after that?

3 MOBASHIR AHMAD: What -- my interest in this  
4 thing, this is outside our quarter section, is to  
5 establish continuity between Squaw Canyon 1-19 and  
6 3-19. These numbers have been transposed. And quite  
7 often, in the DOGM records, a lot of older wells are  
8 transposed.

9 MR. CLAWSON: Mr. Chairman, for purposes of  
10 clarifying the record, can I ask him some questions?

11 CHAIRMAN JOHNSON: Yes. I would appreciate  
12 that.

13 MR. CLAWSON: Okay. Let's go back to the  
14 beginning.

15 MOBASHIR AHMAD: Okay.

16 MR. CLAWSON: Looking at Exhibit No. 10,  
17 is -- is this a map of subject Section 19?

18 MOBASHIR AHMAD: Yes.

19 MR. CLAWSON: And are the subject lands, the  
20 northeast quarter of Section 19, where we see the  
21 3-19 Fed and the McCulloch 19-1?

22 MOBASHIR AHMAD: Yes.

23 MR. CLAWSON: Okay. Is this a record that  
24 is part of MAR/REG's business files?

25 MOBASHIR AHMAD: Yes.

1                   MR. CLAWSON:   Where did MAR/REG get this  
2                   from?

3                   MOBASHIR AHMAD:   This is an internal memo  
4                   for Marathon Oil and McCulloch Oil Company.

5                   MR. CLAWSON:   So it was generated by those  
6                   two companies?

7                   MOBASHIR AHMAD:   Correct.

8                   MR. CLAWSON:   And do you know how they  
9                   generated it?

10                  MOBASHIR AHMAD:   They generated it through  
11                  the -- the -- the depths that they found when they  
12                  were drilling the wells, and it is pretty much  
13                  correct to our side.   This is the porosity structure  
14                  of the Upper Ismay.

15                  MR. CLAWSON:   So you have examined the  
16                  evidence that's presented to the extent that you have  
17                  in your possession -- MAR/REG has in its  
18                  possession -- you have examined the evidence that's  
19                  portrayed on this map, and it conforms to your  
20                  interpretation?

21                  MOBASHIR AHMAD:   Yes.   Especially -- except  
22                  for this well, as you have noticed, there's no depth  
23                  written for the porosity on this.

24                  MR. CLAWSON:   Okay.   When you say "this  
25                  well," what well are you talking about?

1 MOBASHIR AHMAD: The 16-18.

2 MR. CLAWSON: And that's in the upper

3 right-hand corner?

4 MOBASHIR AHMAD: Right. Section 18.

5 MR. CLAWSON: Okay. Is this a map of the

6 Squaw Canyon Field.

7 MOBASHIR AHMAD: Yes, it is.

8 MR. CLAWSON: Are there any -- well, you --

9 you briefly just testified a little -- do you know

10 the vintage of this map?

11 MOBASHIR AHMAD: I think it was 1980, early

12 '80s.

13 MR. CLAWSON: And when you compare well

14 numbers from records going back to 1980 and bring

15 them forward, is it -- is it -- does it happen that

16 the numbers are transposed?

17 MOBASHIR AHMAD: Often.

18 MR. CLAWSON: Do you find that going on on

19 this map?

20 MOBASHIR AHMAD: Yes. Let me cover the --

21 we have basically six wells on this -- on this

22 particular map. Five have been correlated as to

23 their depths. That is -- let's see. This is 19-1.

24 And that is -- that's correlated with our records.

25 Then I will just be -- first one is instead

1 of McCulloch 19-1, that's Squaw Canyon 1-19.

2 MR. CLAWSON: And where is that?

3 MOBASHIR AHMAD: This is in the southwest --  
4 southeast corner of -- of -- of off the quarter  
5 section of the subject lands.

6 CHAIRMAN JOHNSON: So southeast of the  
7 northeast.

8 MR. CLAWSON: (Nods head.)

9 MOBASHIR AHMAD: Yes. Yeah, the subject  
10 land in this question is northeast. Then going down,  
11 we have Federal 3-19. It's written as McCord  
12 (phonetic) 3-19. That is Federal 3-19.

13 MR. CLAWSON: And that's located --

14 MOBASHIR AHMAD: In -- yes -- on the  
15 northwest corner of the northeast quarter.

16 MR. CLAWSON: Okay.

17 MOBASHIR AHMAD: And then McCulloch 19-2 is  
18 Federal 19-2, and that is in the central portion of  
19 the northwest quarter.

20 And then Chambers 10-19, which is in the  
21 south central part of the southeast quarter, is  
22 property known as Squaw Canyon Federal 10-19.

23 And then in Section 18, south central is  
24 McCord called federal 1-18, and that is -- property  
25 name is Tin Cup Federal 1-19.

1           And the only one that's left over is this  
2           unknown 16-18; however, we do have two wells in  
3           Section 18. One is in the southeast corner of the  
4           southwest quarter, and the other is in the northwest  
5           corner of the southwest quarter.

6           And both of these were essentially dry  
7           holes. Oh, one location is abandoned. Excuse me.

8           MR. CLAWSON: So on this Exhibit 10, the  
9           Chambers 16-18 well that's plotted on this map  
10          doesn't show up in the divisions records.

11          MOBASHIR AHMAD: Just give me one second.  
12          Let me just --

13          MR. CLAWSON: Is that right?

14          MOBASHIR AHMAD: Let me just verify here.  
15          The closest well that I have on my records is  
16          820 feet from the south line, 2140 feet from the west  
17          line. So obviously, that's not the same well.

18          MR. CLAWSON: So -- so going back to my  
19          question. Southeast.

20          MOBASHIR AHMAD: Okay. That's correct. So  
21          the proper name is Squaw Canyon Federal 16-18.

22          MR. CLAWSON: Okay.

23          MOBASHIR AHMAD: Okay. My fault. I had it  
24          marked. And that was marked and abandoned.

25          MR. HAROUNY: Which one was --



1           MOBASHIR AHMAD: The Chambers 16-18, the  
2 proper name is Squaw Canyon Federal 16-18. And this  
3 was plugged and abandoned as marked, but had a slight  
4 gassier in the Upper Ismay.

5           MR. CLAWSON: So having clarified this  
6 exhibit and corrected some of the labeling issues,  
7 can you please tell us the importance of this map?

8           MOBASHIR AHMAD: This basically shows you  
9 the depths to the Upper Ismay porosity -- zones of  
10 porosity. And it's -- it's -- it's correct mostly,  
11 except for establishes some continuity between 19- --  
12 I will read it to expedite matters as it's labeled on  
13 the map so you can follow it.

14          MR. CLAWSON: That would be useful.

15          MOBASHIR AHMAD: The -- the continuity  
16 structure that's showing would be McCord 3-19 and  
17 McCord -- Tin Cup Federal 1-18 does not really exist.

18          CHAIRMAN JOHNSON: Does -- say that again.

19          MOBASHIR AHMAD: What this map is showing is  
20 the above sea level, right, with the negative depths  
21 to the Upper Ismay porosity structure as determined  
22 in the early '80s by Marathon and McCulloch.

23               The depths written to the porosity zones are  
24 correct; however, some of the continuity that is  
25 shown may not exist, especially between 3-19, McCord,

1 and McCord Tin Cup Federal 1-18.

2 MR. JENSEN: How can you say that? What's  
3 your basis?

4 MOBASHIR AHMAD: What's my basis? The quite  
5 evident basis is in the dry hole.

6 MR. JENSEN: The Tin Cup 1-18?

7 MOBASHIR AHMAD: Yes.

8 CHAIRMAN JOHNSON: Mr. Clawson, what's the  
9 purpose of this exhibit?

10 MR. CLAWSON: I would say it's to show the  
11 structural area extent of the algal mound.

12 CHAIRMAN JOHNSON: But Mr. Ahmad is just  
13 saying he doesn't agree with you.

14 MR. CLAWSON: He doesn't agree with the --

15 CHAIRMAN JOHNSON: The continuity.

16 MR. CLAWSON: We're clarifying something.

17 MR. HAROUNY: He doesn't agree with the  
18 names either.

19 MR. CLAWSON: Well, no. The names do  
20 change.

21 MR. HAROUNY: This map doesn't show any  
22 continuity.

23 MOBASHIR AHMAD: This just shows the -- this  
24 is basically showing the structural relationship of  
25 the formations, but it does correlate it to the

1       porosity zones in the Upper Ismay.

2               MR. HAROUNY:   Okay.   But the dry hole is on  
3       the other side of the productive porosity zone.

4               THE WITNESS:   Yeah, it shows you the depth  
5       of the projected structure, like minus 329 feet below  
6       sea level.   But the only thing I am referring to, and  
7       maybe it's the confusion, is even though the porosity  
8       zone exists there, there is no oil there because that  
9       is a dry hole.   That is what I say.

10              MR. CLAWSON:   So just to clarify, the map is  
11       accurate in terms of porosity, but that doesn't  
12       necessarily mean that there's oil there?

13              Does that help?

14              MR. JENSEN:   I hear.   I just don't know what  
15       it means.   And I explained in general, relative --  
16       relative to your request.

17              MOBASHIR AHMAD:   It's irrelevant, actually.

18              MR. CLAWSON:   Your statement is irrelevant?

19              MOBASHIR AHMAD:   Correct.

20              MR. CLAWSON:   Your correlation per your  
21       testimony is irrelevant.

22              MOBASHIR AHMAD:   Correct.

23              MR. CLAWSON:   But I think we need to step  
24       back a bit and establish what an algal mound is,  
25       because some of the members of the board may not be

1 all that familiar with the nature of this clay  
2 concept.

3 MOBASHIR AHMAD: Essentially, what we are  
4 trying to establish and the reason for us to come in  
5 front of the board is that we believe there is  
6 continuity in the northeast quarter of the section,  
7 looking for the algal mounds. Or especially in the  
8 Upper Ismay, and possibly -- and -- at least from our  
9 lots, in the Desert Creek.

10 Now, just because a structure is laid, it  
11 also matters where the source rocks are, if there is  
12 a cap rock on top, they've got the oldest ones  
13 standing. Especially, those algal mounds are not  
14 very extensive features. They would start and  
15 finish.

16 MR. CLAWSON: Let me interrupt you there.  
17 Would you please tell the board what an algal mound  
18 is?

19 MOBASHIR AHMAD: An algal mound is an air  
20 shore feature that is -- that is left over after --  
21 after the deposition. And that's --

22 MR. CLAWSON: Are they -- are they --

23 MOBASHIR AHMAD: They are hold straws.

24 MR. CLAWSON: I'm sorry?

25 MOBASHIR AHMAD: They're hold straws, but in

1 the oil company or someplace else, they will  
2 regain --

3 MR. CLAWSON: Are they a blanket sheet  
4 sediment?

5 MOBASHIR AHMAD: Not necessarily, no.  
6 They're discontinuous features. Semi-continuous.

7 MR. CLAWSON: Are they limited?

8 MOBASHIR AHMAD: Yes.

9 MR. CLAWSON: Are -- are they small  
10 features?

11 MOBASHIR AHMAD: Yes.

12 MR. CLAWSON: Isn't Squaw Canyon Field a  
13 small feature?

14 MOBASHIR AHMAD: Yes, it is.

15 MR. CLAWSON: If it's a small feature, is --  
16 is it -- well -- so based on Exhibit 10, and your  
17 analysis of the records and -- and this map, does  
18 this give a picture of the aerial extent of -- of the  
19 productive or the possible productive zone in the  
20 Desert Creek formation?

21 MOBASHIR AHMAD: Yes, it does.

22 MR. CLAWSON: For -- in the spaced  
23 intervals?

24 MOBASHIR AHMAD: Yes.

25 MR. CLAWSON: Testifying on the request for

1 action?

2 MOBASHIR AHMAD: Yes.

3 MR. CLAWSON: Is that the general purpose of  
4 this?

5 MOBASHIR AHMAD: Yes, it is.

6 MR. CLAWSON: Does that help?

7 MR. HAROUNY: You kind of lost me. Sorry.

8 The general purpose is if it is to establish  
9 porosity throughout the upper -- upper part of  
10 Section 19, and the subject part of Section 18, and  
11 the -- and the porosity zones, which basically  
12 Ismay -- Upper Ismay formation, that's okay.

13 But what is the feature that makes it  
14 noncontinuous, the porosity zone's there but why is  
15 it -- is it not saturated? So the issue being is  
16 where is the oil water contact, if you will, and  
17 where is saturation point or not, and at what point  
18 in time the current proposed well is well outside of  
19 that line. At what point in time it's going to be  
20 horizontal -- horizontal, and what point in time it's  
21 going to be within the porosity zone.

22 MR. CLAWSON: That's testimony that's going  
23 to come later. With -- with -- as to the -- as to  
24 where the horizontal well will intercept. I mean,  
25 we're trying to establish an existence of the pull

1       between the northeast corner.

2               MOBASHIR AHMAD:   May I say something?

3               I think what has led to confusion is there's  
4       some technical terms which you are not quite  
5       understanding.  1-19 is above and outside our agency  
6       action request.  Our agency agent [sic] request is  
7       for the northeast quarter.  And I have established to  
8       answering the questions of our attorney, that there  
9       is continuity between 1-19 and 3-19.  And this is  
10      outside of the subject matter for this hearing.

11              I just mentioned that a fact in passing, and  
12      I've not -- do not mean to --

13              MR. CLAWSON:  It's been suggested that maybe  
14      we take a five-minute break.

15              MR. JENSEN:  I think that would be a good  
16      idea.

17              CHAIRMAN JOHNSON:  Let's take a five-minute  
18      break.

19              MR. HAROUNY:  I need --

20              CHAIRMAN JOHNSON:  Okay.  It's -- let's  
21      reconvene at five minutes until 11.

22                      (Short recess taken.)

23              MR. JOHNSON:  Okay.  Mr. Clawson, go ahead.

24              MR. CLAWSON:  Thank you, Mr. Chairman.  I  
25      want to --

1                   Thank you, Mr. Chairman.

2                   I want to briefly touch again on Exhibit 10,  
3                   try to -- try to clarify once again, and -- and ask  
4                   my witness, is -- does Exhibit 10 -- is it mapped on  
5                   porosity, the Desert Creek Formation?

6                   MOBASHIR AHMAD:   No, it is not.

7                   MR. CLAWSON:   What is it mapped on?

8                   MOBASHIR AHMAD:   It is mapped on the  
9                   structural depth to the Upper Ismay carbonate  
10                  structure.

11                  MR. CLAWSON:   To the base of the Upper  
12                  Ismay?

13                  MOBASHIR AHMAD:   No, to the top of the Upper  
14                  Ismay, carbonate structures specifically in the Upper  
15                  Ismay.

16                  MR. CLAWSON:   Oh, I'm sorry.  I jumped  
17                  ahead.  My fault.  So it's not to the -- the top of  
18                  the Upper Ismay?

19                  MOBASHIR AHMAD:   Correct.

20                  MR. CLAWSON:   Okay.  Now I'd like you to  
21                  refer to Exhibit No. 11.

22                  Have you examined this exhibit and are you  
23                  familiar with it?

24                  MOBASHIR AHMAD:   Yes, I have.

25                  MR. CLAWSON:   Is -- is this a -- a similar



1 type map that was produced by a prior owner of -- of  
2 these properties?

3 MOBASHIR AHMAD: It's been -- it's produced  
4 similarly to Exhibit 10.

5 MR. CLAWSON: By the same parties that  
6 produced Exhibit 10?

7 MOBASHIR AHMAD: Yes. Yes. And it is part  
8 of the larger map produced.

9 MR. CLAWSON: And are we looking at subject  
10 Section 19 again?

11 MOBASHIR AHMAD: Exactly the same.

12 MR. CLAWSON: And -- and the wells, as they  
13 are labeled on this exhibit, have the same  
14 relationship that you already testified to on  
15 Exhibit 10?

16 MOBASHIR AHMAD: Yes.

17 MR. CLAWSON: Would you please tell us what  
18 this exhibit and what it shows -- what this exhibit  
19 is and what it shows.

20 MOBASHIR AHMAD: This an ISO pack which  
21 basically shows the thickness of the Upper Ismay  
22 carbonate beneath the subject lands.

23 MR. CLAWSON: And what is -- what is an ISO  
24 pack?

25 MOBASHIR AHMAD: ISO pack shows the

1       thickness of the particular zone of concern.

2               MR. CLAWSON:   Does this show any real extent  
3       of the expected pool --

4               MOBASHIR AHMAD:   (Nods head).

5               MR. CLAWSON:   -- in the upper Ismay  
6       formation?

7               MOBASHIR AHMAD:   Yes, it does.

8               MR. CLAWSON:   Okay.   Now I'd like to move on  
9       to Exhibit No. 12.

10               (Exhibit 12 was discussed.)

11               MR. CLAWSON:   Are you familiar with this  
12       exhibit, and have you examined it?

13               MOBASHIR AHMAD:   Yes, I have.

14               MR. CLAWSON:   Could you please provide us  
15       with a description of what this exhibit is.

16               MOBASHIR AHMAD:   This shows you the Desert  
17       Creek structure similar to Exhibit 10 for the Upper  
18       Ismay structure.

19               MR. CLAWSON:   Okay.   Is this rectangular box  
20       equivalent to subject Section 19?

21               MOBASHIR AHMAD:   Yes, it is.

22               MR. CLAWSON:   And first of all, is this the  
23       Desert Creek structure map?

24               MOBASHIR AHMAD:   Yes, it is.

25               MR. CLAWSON:   Okay.   And -- and these -- the

1 numbers, the 3-19 and another number, 1-19, those  
2 represent the wells that exist in the northeast  
3 quarter of Section 19?

4 MOBASHIR AHMAD: Correct.

5 CHAIRMAN JOHNSON: Mr. Clawson.

6 MR. CLAWSON: Is there a --

7 CHAIRMAN JOHNSON: Wait, just a minute.

8 First of all, I don't see a 1-19 on this  
9 map.

10 MR. CLAWSON: Did I say 19? 1-9. Okay.  
11 I'm going --

12 MR. HAROUNY: Okay. Okay.

13 MR. CLAWSON: Do you see 1-9?

14 MOBASHIR AHMAD: Yes.

15 MR. CLAWSON: Is that incorrectly labeled?

16 MOBASHIR AHMAD: Yes, it should be 1-19.

17 MR. CLAWSON: Okay. And the other wells --  
18 well, the other -- well, well symbols that are  
19 labeled on this map, are those numbers consistent  
20 with what you testified as to Exhibit No. 10, terms  
21 of the wells.

22 MOBASHIR AHMAD: 19 -- 2-19 should be 19-2.  
23 And the Amigos -- Three Amigos well is not plotted on  
24 here, but that is as given before for the proper  
25 location.

1           MR. CLAWSON: Have you examined the Three  
2 Amigos well?

3           MOBASHIR AHMAD: Yes.

4           MR. CLAWSON: And would the -- would --  
5 would -- does that well provide any information that  
6 would change your interpretation?

7           MOBASHIR AHMAD: No, it does not.

8           MR. CLAWSON: Did you generate this map?

9           MOBASHIR AHMAD: Yes, I did.

10          MR. HAROUNY: Mr. Clawson, can I -- can I  
11 please --

12          MR. CLAWSON: Yeah, sure.

13          MR. HAROUNY: What if -- if I lost this  
14 sheet of paper, how would I find it somewhere and  
15 what would it be pertaining -- what, besides -- there  
16 is no range or section on it.

17          MR. CLAWSON: Right. And he just testified  
18 that the rectangle is subject to Section 19, which is  
19 the same, you know, town -- section that we've been  
20 dealing wit.

21          MR. HAROUNY: Okay.

22          MR. CLAWSON: And he also testified that the  
23 wells 3-19 and the 1-9, which should be 1-19.

24          MR. HAROUNY: So this is -- we should put a  
25 big 19 in the middle of this somewhere. This is

1 Section 19?

2 MR. CLAWSON: Right. It should have a --

3 MR. HAROUNY: I know that, but for purpose  
4 of identification for exhibits --

5 MR. CLAWSON: I agree. It should have a lot  
6 more labels on it.

7 MR. QUIGLEY: So my question is: is 1-19 the  
8 same well as 19-1?

9 MOBASHIR AHMAD: Yes.

10 MR. QUIGLEY: Okay.

11 MR. CLAWSON: Over a period of time, if you  
12 go back into the well records, you will find the  
13 well's numbers are transposed frequently, yet it's  
14 the same well.

15 MR. QUIGLEY: They are transposed on the  
16 documents we're reading right here?

17 MR. CLAWSON: Right.

18 MR. QUIGLEY: Okay.

19 MR. CLAWSON: And they may have had that  
20 number back then. On Exhibits 10 and 11, they may  
21 have had those numbers back then. And since that  
22 time, those numbers may have been transposed in the  
23 records. A well -- these are not the unique  
24 identification number for wells. That's the APIN  
25 number, and we have in the APIN number here that's.

1           MR. HAROUNY:   So Mr. Mobashir has not  
2           corrected in his map any names, correct?

3           MR. CLAWSON:   Well, 10 and 11?

4           MR. HAROUNY:   Yeah.

5           MR. CLAWSON:   Actually, those were generated  
6           previously by the prior owners.

7           MR. HAROUNY:   But these new ones --

8           MR. CLAWSON:   These new ones, that's what  
9           we're trying to take care of.

10          MOBASHIR AHMAD:  If I may just clarify  
11          without causing confusion.  Exhibit 19 has not been  
12          entered.  It lists all the wells in this particular  
13          field with API numbers with the formation that's --  
14          with all the particulars.

15          CHAIRMAN JOHNSON:  We -- don't have  
16          Exhibit 19.

17          MR. CLAWSON:   Exhibit -- well, he's called  
18          it Exhibit 19.  I haven't entered -- I haven't filed  
19          Exhibit 19.  It's a summary of all the wells.  Maybe  
20          it would be a really good idea to put that in the  
21          record, so let's do that.

22          MR. JOHNSON:   We're in need of a very good  
23          idea, so go ahead, Mr. Clawson.

24          Are these -- is that the handout we got this  
25          morning?

1           MR. CLAWSON: No. It can be a part of it  
2           though. We haven't got to those exhibits yet.

3           If I could make this part of that package.  
4           So while we're waiting to distribute that summary  
5           sheet, can we continue?

6           MR. JENSEN: Can we go off the record for a  
7           moment?

8           MR. JOHNSON: Let's go off the record.

9                     (Short recess taken.)

10          MR. JOHNSON: Okay. Let's go back on the  
11          record.

12          Mr. Clawson?

13          MR. CLAWSON: It was -- before going off the  
14          record, it was suggested -- or while we were off the  
15          record, it was suggested that perhaps we should  
16          continue this matter until the Board's October  
17          hearing for purposes of clarifying some of these  
18          exhibits. And MAR/REG appreciates the Board's  
19          concerns in those regards, and -- and is agreeable to  
20          continuing this hearing and would move the Board to  
21          continue this hearing until the Board's October  
22          hearing.

23          MR. JOHNSON: Okay.

24          Is there any objection to that from the  
25          Board?

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MR. JENSEN: No objection.

MR. JOHNSON: Okay. Then let's continue  
this until the October 27th hearing of the board in  
Salt Lake City.

MR. CLAWSON: Okay. Thank you very much.

MR. JOHNSON: Thank you.

I believe that's all the matters we have to  
hear this morning, so we are adjourned.

Thank you.

(This meeting was adjourned at

11:13 a.m.)

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REPORTER'S CERTIFICATE

STATE OF UTAH            )  
                                  )  
COUNTY OF UTAH        )

I, Emily A. Gibb, a Certified Shorthand  
Reporter and Registered Professional Reporter, hereby  
certify:

THAT the foregoing proceedings were taken  
before me at the time and place set forth in the  
caption hereof; that the witness was placed under  
oath to tell the truth, the whole truth, and nothing  
but the truth; that the proceedings were taken down  
by me in shorthand and thereafter my notes were  
transcribed through computer-aided transcription; and  
the foregoing transcript constitutes a full, true,  
and accurate record of such testimony adduced and  
oral proceedings had, and of the whole thereof.

I have subscribed my name on this 3rd day of  
October, 2010.

\_\_\_\_\_  
Emily A. Gibb, RPR, CSR